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STEPS TO SURVIVAL

Canada

EMERGENCY MEASURES ORGANIZATION

~~BLUEPRINT FOR~~
~~SURVIVAL No. 4~~



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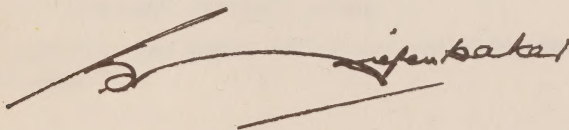
INTRODUCTION

Recognizing that nuclear war would be a catastrophe for all nations, the Canadian Government has joined with other peace-minded nations in doing everything possible to prevent the outbreak of war. While in cooperation with the nations in NATO and with the United States in NORAD Canada maintains its defences to deter aggression, the Government has pursued a course of action designed to reduce world tensions, to bring about agreement providing for a settlement by peaceful means of international disputes, and to achieve disarmament with such controls as are necessary to preserve the security of all nations.

Notwithstanding what has been and is being done, nuclear war is possible either by the intended actions of evil madmen or by miscalculation. Should such a tragedy happen, hundreds of thousands of Canadians might be killed or injured and many cities and towns might be destroyed. On the other hand, many hundreds of thousands of Canadians who would otherwise perish could survive a nuclear war if preparations are made.

Little can be done to prevent damage to property; much can be done to reduce the number of casualties, to rescue and to safeguard the survivors against radiation.

An outline in general terms of what Canadians can and should do to guard themselves and their families against the potential dangers of nuclear war is contained in this booklet. Your personal survival can depend upon you following the advice that is given and the survival of many others may depend on how well you have heeded the advice contained therein.



Prime Minister.

March, 1961.

INTRODUCTION

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THE ELEVEN STEPS TO SURVIVAL

Governments and communities at all levels are planning for the survival of our nation in the event of a nuclear war. But the survival of individuals also will depend upon the preparations that each person makes. And persons ready to take the right action following an attack will increase their chances of survival.

This pamphlet describes what you can do before and following an attack. You can greatly increase your family's and your own protection by taking the Eleven Steps to Survival. These are:

- (1) Know the effects of nuclear explosions.**
- (2) Know the facts about radioactive fallout.**
- (3) Know the warning signals and have a battery-powered radio.**
- (4) Have some shelter to go to.**
- (5) Have fourteen-days emergency supplies.**
- (6) Know how to prevent and fight fires.**
- (7) Know first aid and home nursing.**
- (8) Know emergency cleanliness.**
- (9) Know how to get rid of radioactive dust.**
- (10) Know your municipal emergency plans.**
- (11) Have a plan for your family (and if you are alone, have your own plan.)**

The rest of this pamphlet gives detailed instructions for each of the eleven steps.

KNOW THE EFFECTS OF NUCLEAR EXPLOSIONS

A nuclear explosion releases vast amounts of energy in three forms:

- a. Light and heat;
- b. Blast;
- c. Radiation.

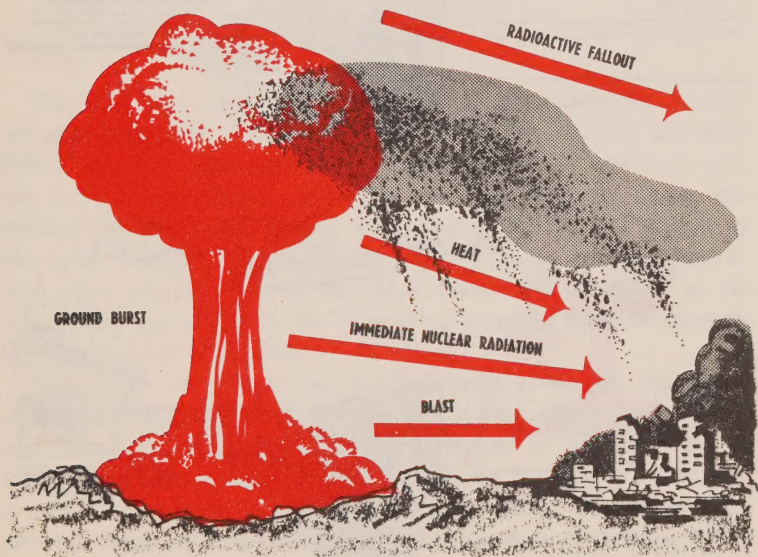
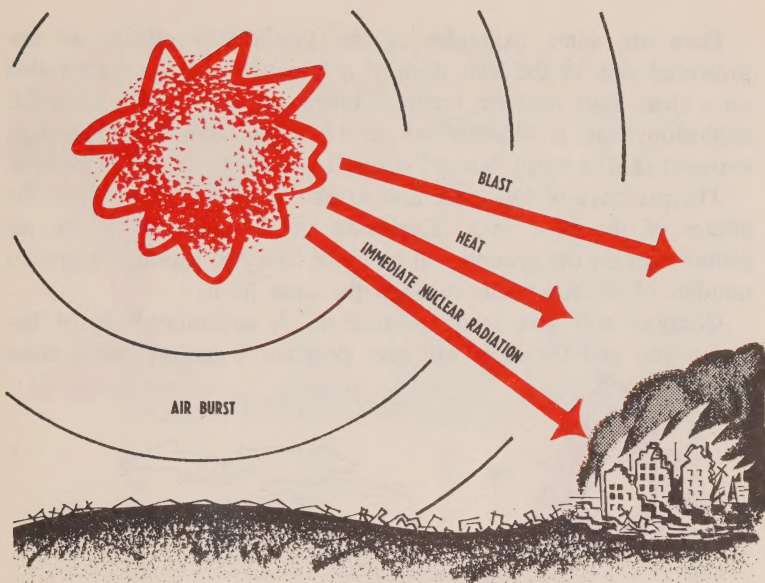
The amount of energy released depends on the size and design of the weapon. The weapon considered most likely to be dropped in Canada and described in this pamphlet is one equal to the explosive force of five million tons of TNT called a 5-megaton weapon. Such a bomb can destroy the largest Canadian city. Bigger weapons exist and might possibly be used, but the effects would be much the same except they would extend over a wider area.

The effects depend on whether the weapon is exploded high in the air, on or near the ground. An air burst usually produces more fire, blast, and damage, while a ground burst results in a big crater and more radioactive fallout. *The effects described below are approximate for a 5-megaton explosion and can only be approximate since effects depend on conditions.*

Light and Heat

A blaze of light brighter than the sun is produced by a nuclear explosion. It lasts for about 15 seconds. The glare from a small test bomb at dawn has been seen more than 400 miles away. Temporary blindness and eye injury can result from the glare if eyes are not shielded.

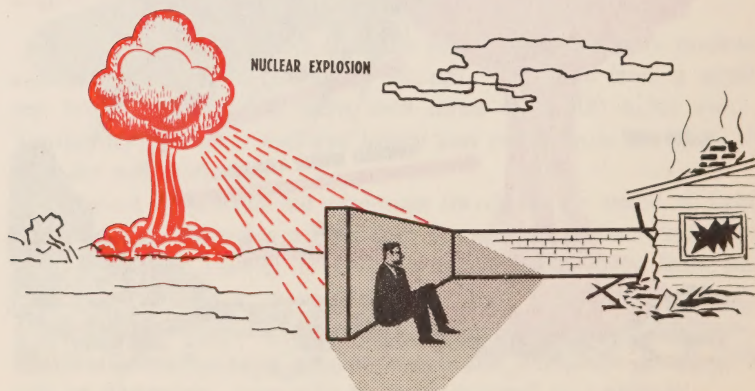
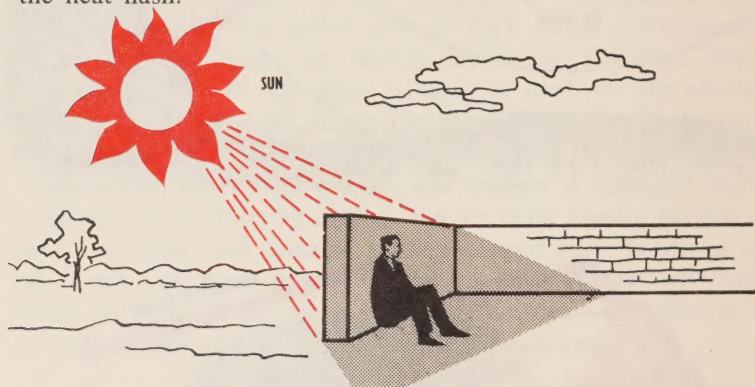
The heat flash from the explosion travels at the speed of light which is 186,000 miles per second. It can start serious fires nine miles away and smaller fires up to twenty miles away from the explosion. Many are caused when the heat flash comes through a window and sets fire to curtains, paper, clothing and furniture. The heat flash also can set fire to wooden buildings. These fires will be dangerous, especially to those trapped in buildings.



Here are some examples of the predictable effects on unprotected skin of the heat flash of a 5-megaton weapon exploded on a clear day: sunburn types of burns up to 23 miles from the explosion; skin is blistered up to 18 miles from the explosion; exposed skin is badly burned up to 15 miles from the explosion.

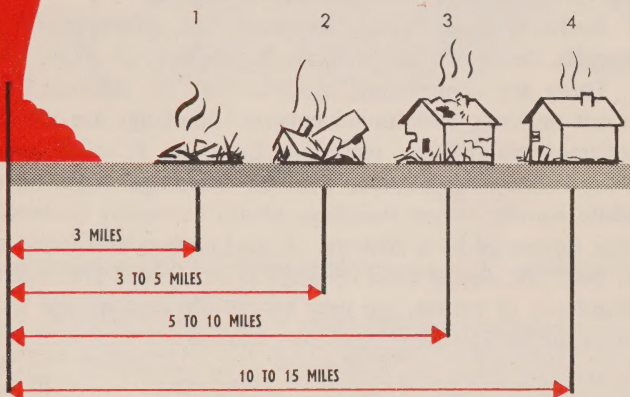
The presence of fog, haze and smoke in the air can reduce the effects of the heat flash. Explosion of the weapon in the air rather than on the ground will be more likely to produce a greater number of serious burns through the heat flash.

Clothing will give some protection. A substantial shield between you and the light will give protection against burns from the heat flash.





- 1 COMPLETE DESTRUCTION
- 2 BEYOND REPAIR
- 3 MAJOR REPAIRS REQUIRED
- 4 LIGHT DAMAGE



Blast

The blast wave travels more slowly than the heat flash. Several seconds may pass after you have seen the light or felt the heat before the blast wave reaches you depending on the distance you are from the explosion. It is like the time between seeing the flash of lightning and hearing the sound of thunder. If caught in the open during a nuclear explosion, you could use this time to find some protection from the blast wave. For example, at 10 miles from the centre of the explosion, it would take 35 seconds for the blast to reach you.

You might be injured by being thrown about by the blast, therefore keep low. The greatest danger is from flying glass, bricks and other objects. People would be injured as far away as 15 miles from the explosion. There would be few survivors within a mile or two from the centre of the explosion. The greater the distance from the centre the lower the percentage of persons killed and injured.

The kinds of damage that the blast could do to buildings are: complete destruction to all buildings up to 3 miles from the centre of the explosion; damage beyond repair to buildings 3 to 5 miles, and the buildings would have to be torn down; major repairs required to buildings 5 to 10 miles before they could be occupied; light to moderate damage to buildings 10 to 15 miles and they could be occupied during repairs.

A 20 megaton bomb increases the approximate ranges of damage described above to 5, 8, 16 and 24 miles.

These are approximate distances, as the strength of buildings is not uniform. Reinforced concrete buildings are the most blast resistant; wood frame structures the least. In some areas 4 miles away from the explosion, concrete buildings might be repairable while wooden frame buildings would be totally destroyed. Buildings supported by a skeleton of steel girders and faced with stone or brick are not as blast resistant as reinforced concrete buildings. Windows, of course, are very vulnerable and are apt to be blown in as far as 25 miles from the explosion.

Radiation

A nuclear explosion causes both immediate radiation and residual radiation.

Immediate radiation is given off at the time of the explosion. It is dangerous only within two or three miles. If you were near the explosion without adequate protection and managed to survive the effects of blast and fire, you would still be seriously affected by this immediate radiation.

Residual radiation is that given off by the radioactive particles left as "fallout" after the explosion. The danger from fallout would be so great and widespread that it is discussed separately in Step 2.

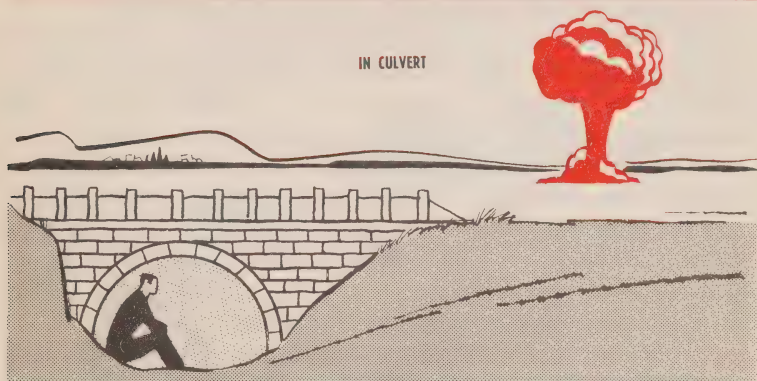
Protection against Heat, Blast, and Immediate Radiation

The pictures below show some of the most likely situations in which you may find yourself at the time of a nuclear attack, and what you should do:

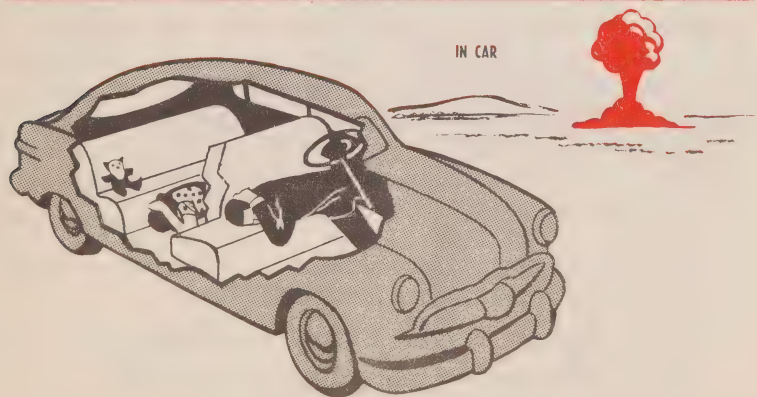
NATURAL TERRAIN



IN CULVERT



IN CAR



KNOW THE FACTS ABOUT RADIOACTIVE FALLOUT

When a nuclear weapon is exploded on or near the ground the danger from radioactive particles is greatest. The force of the explosion may make a crater up to a mile wide and up to a hundred feet deep. Millions of tons of pulverized earth, stones, buildings and other materials are drawn up into the fireball and become radioactive. Some of the heavier particles spill out around the point of explosion. The rest are sucked up into the mushroom cloud which rises as high as one hundred thousand feet.

This radioactive material is then carried by the winds until it settles to earth. This we call "Fallout". Under some circumstances you may see the fallout dust; under others you may not. The radioactivity it gives off cannot be seen. You can't feel it. You can't smell it. But fallout doesn't come out of the sky like gas and seep into everything. It can be described as a snow, drifting with the winds miles above our heads. Because the wind direction varies at different levels high above the ground, it is not possible to judge from the ground where the fallout will settle. It can settle hundreds of miles from the explosion.

The fallout from a 5-megaton explosion could affect seriously as much as 7000 square miles. If nothing were done to gain protection during the period before the radioactivity lost most of its intensity, there would be serious danger to life in that area.

Because fallout is carried so far and covers such a large area, it could be the greatest danger to the largest number of Canadians in a nuclear war. If Canada was not hit by nuclear bombs, bombs exploding in the United States close to our borders could result in serious fallout in many parts of Canada.

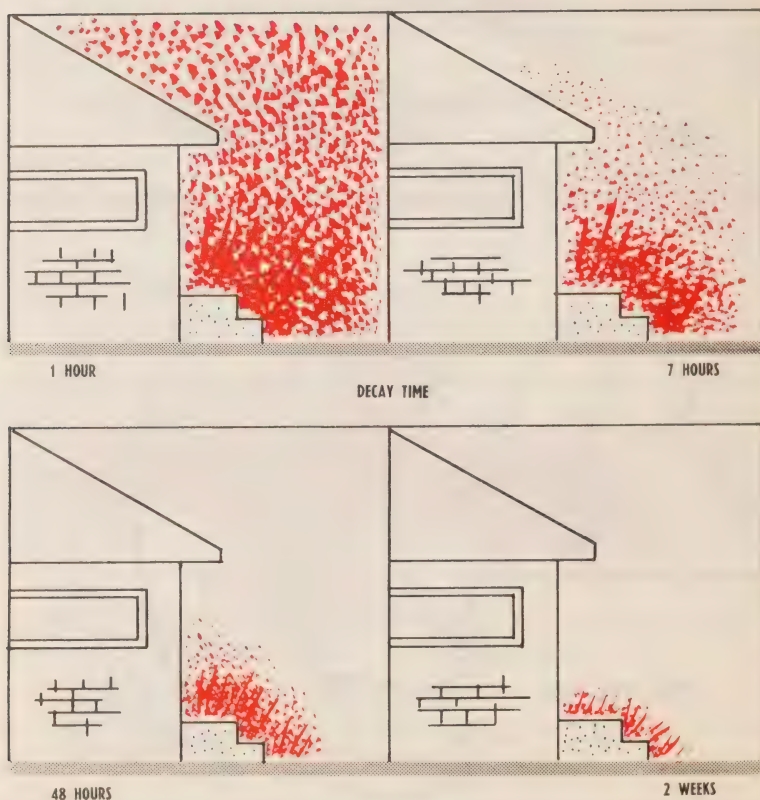
There are four things which determine the amount of radiation reaching your body from fallout. They are:

- a. The *time* that has passed since the explosion;
- b. The length of *time* you are exposed to fallout;
- c. The *distance* you are from the fallout;
- d. The *shielding* between you and the fallout.



Time

The radioactivity in fallout weakens rapidly in the first hours after an explosion. This weakening is called “decay”. After seven hours, fallout has lost about 90% of the strength it had one hour after the explosion. After two days it has lost 99%; in two weeks 99.9% of its strength is gone. Nevertheless, if the radiation at the beginning were high enough, the remaining 0.1% could be dangerous. To remove any doubt, the radiation must be measured by special instruments handled by people trained to use them.



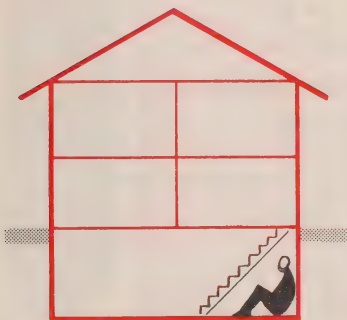
Therefore, if you stay in a shelter during the first days after an explosion, you escape the strongest radiation. *You should stay in the shelter until you have been told over the radio that it is safe to come out.*



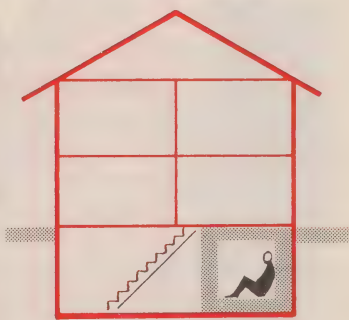
IN THE OPEN NO PROTECTION



FRAME HOUSE WITHOUT BASEMENT SLIGHT PROTECTION



BRICK HOUSE WITHOUT SHELTER FAIR PROTECTION



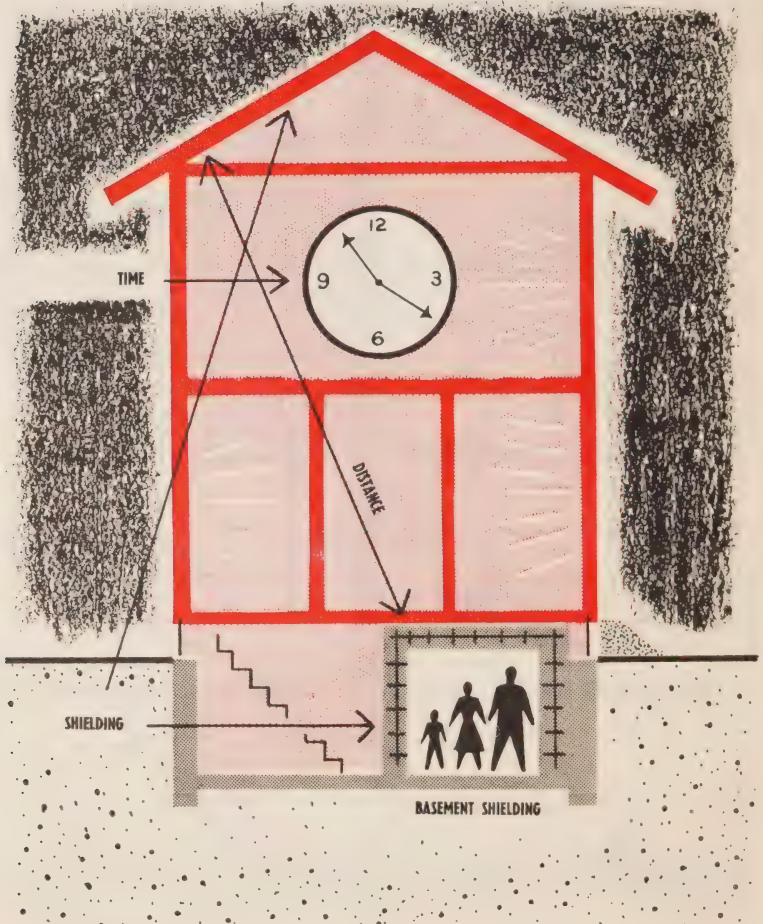
HOUSE WITH SHELTER BEST PROTECTION

Distance

The strength of radiation reaching your body is reduced the further you are from the fallout. Here are some pictures of the safest place to be when you are in various kinds of buildings.

Shielding

The most effective protection is to place some heavy material between yourself and the fallout. The heavier the material, the better the protection. Fortunately, many common materials give excellent protection. The materials and design of the fallout shelter recommended in Blueprint for Survival No. 1* will stop penetration of 99% of outside radiation.



* See page 40.

Similar protection can be gained from these materials:

- a. 16 inches of solid brick;
- b. 16 inches of hollow concrete blocks filled with mortar or sand;
- c. 2 feet of packed earth—3 feet if loose;
- d. 5 inches of steel;
- e. 3 inches of lead;
- f. 3 feet of water.

A fallout shelter is the best way to protect your family and yourself against radiation because:

- a. It keeps the fallout at a *distance*;
- b. It *shields* you from radiation;
- c. The *time* spent there is the period when radiation is most intense.

By providing your family and yourself with a shelter, you are unlikely to suffer serious effects from radioactive fallout.

PERSONAL DANGER FROM FALLOUT

Radioactive particles in contact with your skin for a few hours may produce a burn. Follow Step 9 to prevent this injury.

Radioactive particles swallowed in food or water may produce illness after several days. Follow Step 9 to prevent this injury. Thoroughly wash your hands and utensils before preparing or eating food.

Radioactivity from an area of fallout may produce illness in the unprotected individual after a few days. Follow Step 4 to prevent this injury.

Radiation illness develops slowly and cannot spread to other people. Except for temporary nausea shortly after exposure, evidence of serious injury from radiation may only appear after an interval of a few days to three weeks. Loss of hair, loss of appetite, increasing paleness, weakness, diarrhoea, sore throat, bleeding gums and easy bruising combined, indicate that the individual requires medical attention. *Nausea and vomiting may be caused by fright, worry, food poisoning, pregnancy and other common conditions.*

KNOW THE WARNING SIGNALS AND HAVE A BATTERY-POWERED RADIO

Those centres of population more likely to be affected by fall-out or possible attack are being provided with sirens. It is hoped that other areas will have warning systems based upon telephones, bells, and other types of instruments. This is the reason that you must know your municipal plan and from it develop a plan for yourself and family.

There are three types of warning: THE ALERT; TAKE COVER and the ALL CLEAR.

The ALERT— A steady note on the sirens for three minutes or more means:

- an attack is possible or radioactive fallout from an attack elsewhere is expected;
- turn on your radio; and while one member of your family listens for instructions, the others should proceed with household preparations.

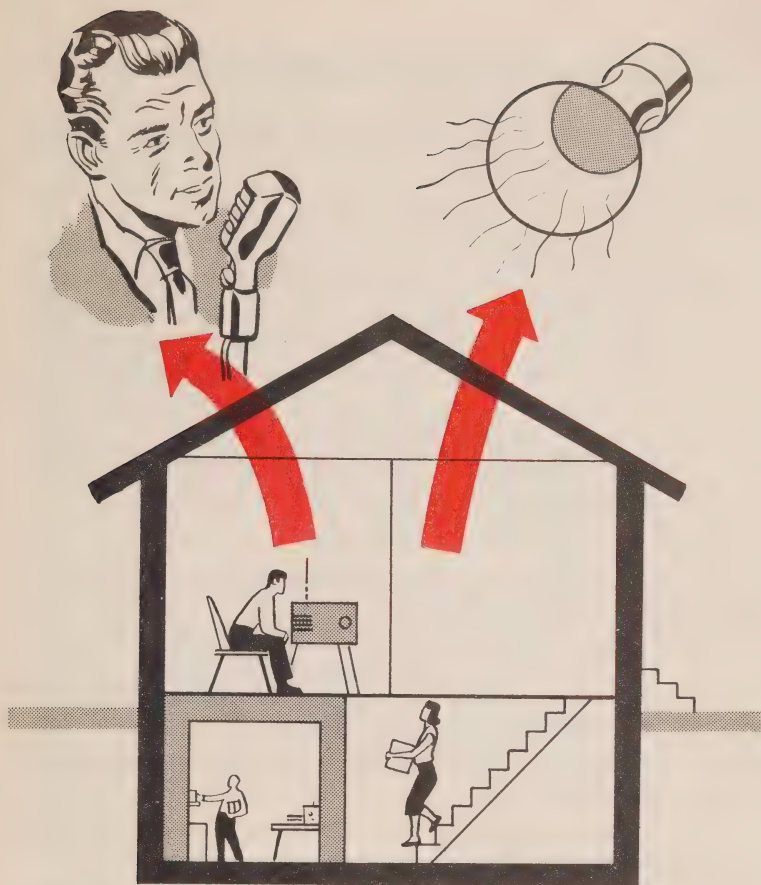
TAKE COVER— A rising and falling note on the sirens for three minutes or more means:

- danger of an immediate attack in your area;
- take cover immediately;
- if not already operating, turn on your radio.

(If there is not time to sound the ALERT, the first signal may be the TAKE COVER).

The ALL CLEAR Will be announced only on the radio and NOT by the sirens;

- Announcement of the ALL CLEAR, unless stated, does NOT cancel the ALERT;
- The ALL CLEAR is given when your area is expected to be free from radioactive fall-out or attack for more than an hour.



A battery-powered radio is essential because electricity may be cut off. If you are going to buy a new one, it should be checked for reception inside the shelter. It may need an outside aerial.

An emergency broadcasting plan has been prepared. *Following the ALERT*, the advice and instructions you might hear over the radio might well include:

- a. An authoritative message from the Prime Minister or another national leader, giving you information about an attack taking place on Canada or her Allies; later messages would describe the situation.

- b. Information about the time available to put your family survival plan into action;
- c. Advice as to whether you have time to leave town if you wish to do so;
- d. Instructions about routes out of town;
- e. Advice to those who do not live in likely target areas as to how they should protect themselves against fallout. While no one can say with certainty what the probable targets would be, the more likely ones in Canada might be Calgary, Edmonton, Halifax, Hamilton, London, Montreal, Niagara Falls, Ottawa, Quebec City, Saint John, N.B.; St. John's, Nfld., Toronto, Vancouver, Victoria, Windsor, Winnipeg. These cities and the areas immediately surrounding them are called *target areas*.
- f. How to conserve food, water, fuel.

Following an attack, the advice and instructions you would get over the radio might include:

- a. Whether nuclear explosions have taken place;
- b. Information about the parts of the country which might be affected by radioactive fallout;
- c. The length of time before fallout is likely to reach specific towns or areas;
- d. Whether other attacks are expected; ways to increase your fallout protection;
- e. Whether it is safer to stay in your home town or go to other areas;
- f. People living in safe areas will be advised they are free of danger;
- g. Instructions to those in fallout areas as to when they could leave their fallout shelters and for how long;
- h. Requests for help in survival operations such as rescue, firefighting, stretcher bearers;
- j. Importance of conserving your own food, water and fuel;
- k. How to keep warm if the power is off and the weather is cold.

HAVE A SHELTER

Steps No. 1, 2, and 3 gave you the information necessary to judge why it is important to provide your family and yourself with a shelter. But what kind of shelter? This decision you must make yourself after studying the problem.

Study your shelter requirements in the same way that you would accident insurance. Decide upon the degree of protection you want for your family and yourself. Shelter is your insurance against something you hope will not happen, but if it does, will give you protection.

Blast shelters of the type commonly used in European countries during the Second World War would not provide the proper protection against the blast of a nuclear explosion. These shelters were designed to withstand shock pressures lasting something like 1/100 of a second. Shelters designed to withstand the pressures created by a nuclear explosion must be able to stand up to pressures lasting as long as 6 seconds. In addition, they must be capable of giving the occupants protection against fires outside the shelter as well as against radiation.

The fallout shelter is designed to give protection against radioactive fallout only. Because most people in Canada live outside of likely target areas and would likely not be affected by the blast and heat effects of nuclear explosions, protection against fallout is all that is required by them.

The type of shelter required depends on the distance from the explosion. And unfortunately it is not possible to know this in advance. That is why each individual must make his own decision when selecting the type of shelter he wishes to have.

You may have to stay in your shelter for as long as 14 days. The conditions will be uncomfortable especially for those who have not made adequate preparations. But the conditions will not be intolerable.

Blueprint for Survival No. 1 gives details of a fallout shelter for the home in which you now live. If you rent this home the decision to construct a shelter must be taken jointly with your landlord. The cost will vary between \$300 and \$500.

Blueprint for Survival No. 2 gives details of a fallout shelter for the new home you may be planning to build. The cost will be approximately \$500.

These two pamphlets now are available from your local civil defence authorities.

Home Improvement Loans are available for the shelter described in Blueprint for Survival No. 1. Shelters constructed in new homes built under the National Housing Act can be financed by an increase in the loan. The maximum amount available for this purpose is \$500. Repaid over 25 years this results in a monthly payment of about \$3.40.

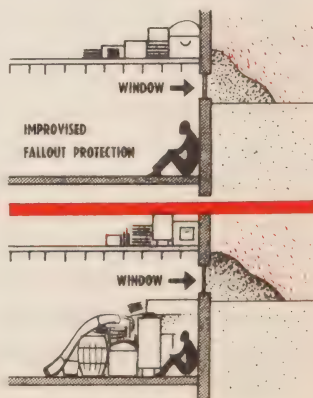
The government will shortly issue pamphlets on backyard fallout shelters, group shelters and blast shelters. In addition to being made available to the people of Canada, they will be made available to public libraries.

Improved Protection Against Fallout

You may not have a fallout shelter when a warning of fallout is given. Here are some tips on how to increase your protection in a basement. The amount of protection you will get will depend upon how much time you have available from the time you get the warning until the fallout arrives.

a. Block your basement windows with earth, bricks, concrete blocks, books or even bundles of newspapers. On the floor above the corner of the basement you select as your refuge area, pile any heavy objects you may have available. For example, bricks, trunks filled with clothes, books and if at the right time of year, even earth from outside.

b. Against those parts of the basement which are above ground, heap earth, sand, bricks, or concrete blocks. And around the corner you select as your safest spot, place any heavy objects, such as work benches or trunks.



If you do not have a basement, go to that part of the house (center hall or clothes closet) which will keep you the greatest distance from the fallout dust accumulating on the roof and ground. If there is time, you could increase your protection by piling books, trunks, dressers as deeply and as high as you can. Don't forget the battery radio!

Improved Protection Against Blast

If you do not have a blast shelter and live in a likely target area when a warning of attack is given, and you decide that you are not going to evacuate, one of the simplest ways of improvising an anti-blast shelter is to build a lean-to (bed springs or boards) against a work bench or heavy table, and pile mattresses on it and at the ends. This could protect you from loose bricks, broken glass etc. which the blast will fling about.

Or, you could if you had sufficient warning of attack, dig yourself a trench in the yard—not too close to any buildings which could collapse into it.

If you survive the blast and heat of the explosion, you would have to find other protection against the fallout which will come down later (See Step 11). Don't forget the battery radio!

None of these improvised measures is as good as a properly equipped shelter but any single one of them could mean the difference between life and death.



IMPROVISED BLAST PROTECTION

HAVE 14-DAYS EMERGENCY SUPPLIES

Nuclear attacks on centres of production, and conditions of fallout, may curtail the distribution of available food stocks until several days or even weeks following these attacks. Persons who had taken shelter against fallout might be advised to stay in their shelters for as long as fourteen days. Those who had chosen to evacuate likely target areas would be dependent on available food resources in the reception towns. Because of these possibilities it is recommended that every person should have emergency supplies. These supplies should include food, water, battery radio, a first aid kit and, if necessary, medical supplies for invalids or babies. Heavy clothing would be necessary in winter. Extra changes of clothing should be considered, particularly stockings and under-clothing.

A suggested list of emergency supplies is given below. Many of the items are specifically required for shelters. For those who are likely to evacuate a target area, special consideration should be given to the items of food which can be put into the family car. These supplies should be packaged so that they can be quickly put into the car. Some may choose to keep these items stored in the car. In both cases the food should be used and replaced at least once a year.

Many of the recommended items are already in your home. Because people who do not live in likely target areas will probably have time to make last minute preparations they should not go to the unnecessary expense of duplicating items of food, clothing and equipment which can readily be transferred into the shelter.

Persons who choose to evacuate should have road maps in their cars. It is recommended that people in shelters also have two or three road maps. You could then relate the information about areas under fallout which you would hear about over the radio, to your actual location. Toys, games, books for your children will help to occupy their time. Try to organize your time so that it will pass more quickly. Do not forget your battery radio will keep you in contact with the outside world.

The suggested list of items from which your two weeks' supplies should be developed is:

Equipment

Beds (Bunks or folding)	Hammer
Table (Folding or other type)	Flashlight
Stools (Fold flat)	10 Gallons Kerosene (2 gals. in shelter; remainder in basement)
Cooking vessels	Matches
Cups and Plates (disposable)	Garbage can (2 if no waste water runoff is possible)
Knives, forks, spoons	Garbage bags
Can openers	Hand basin
Paper towels	Road maps
Kerosene cooker	Screws
Kerosene Lamp	Nails
Electric Lamp and Batteries, spare bulbs	Pliers
Toilet	Fire Extinguisher (not carbon tetrachloride)
Polyethylene bags for toilet	$\frac{1}{2}$ -inch rope
Shovel	String
Crowbar	Battery radio
Axe	Clock
Pocket knife	Spare Radio Batteries
Saw	
Whistle	
Screwdriver	

Recreational

Calendar	Chess, checkers, other games
Books	Crossword, other puzzles
Paper	Knitting, sewing, etc.
Pencils	Hobby materials
Playing Cards	Plasticine

Toiletries

Soap, Toothpaste, tooth-brushes	Women's basic cosmetics
Detergent	Tissues (face and toilet)
Nail brush	Face cloth
Razor, blades and soap	Towels
	Brush and comb

Clothing and Personal Items

Coveralls, rubber boots, rubber gloves for adults. To be used in venturing outside even after instructions have been given that this is safe for short periods.

Bedding (blankets preferable)	Baby clothes
Warm sweaters and socks	Baby feeding equipment
Change of underclothing and socks	Disposable diapers (two-week supply)
Personal hygiene items for women	Plastic sheeting
	Legal Papers

Medical

(See Step 7)

Food

These are the suggested amounts per adult for 14 days. Food-stuffs should be used and replaced at least once every year. Check off the items as you stock them in the shelter and mark the purchase date on them.

Milk:	4 cans milk (16-oz. size evaporated milk or 1-lb. dried skim milk)
Vegetables:	6 cans (15-oz. or 20-oz. size—beans, peas, tomatoes, corn)
Fruits:	6 cans (15-oz. or 20-oz. size—peaches, pears, apple sauce)
Juices:	6 cans juice (20-oz. size—apple, grapefruit, lemon, orange, and tomato)
Cereals:	14 individual packages (sealed in wax bags inside or outside)
Biscuits:	2 packages of crackers (1 lb. each) 2 packages of cookies or graham wafers

Main Dish	2 cans meat (12 oz. each—corned beef, luncheon meats)
Items:	2 cans beef and gravy
	2 cans baked beans (15 or 20 oz. size)
	2 jars cheese
	2 cans fish (8 oz. each)
Canned and Dehydrated	
Soups:	2 cans (10 oz.—bean, pea, tomato, vegetable)

Special Requirements for Children

- For each infant include 14 cans evaporated milk (16-oz. size) and infant food for 14 days.
- For each child up to 3 years, include 8 cans milk. Decrease amounts of other foods according to appetite.
- Food for older children can be the same as for adults; adjust amounts according to appetite.

Other Foods:	1 large jar or can honey, syrup, jam or marmalade
	2 lbs. hard candy
	1 jar or can peanut butter
	1 package tea bags or instant tea
	1 jar sugar
	1 jar instant coffee
	Salt and pepper
	Instant chocolate powder
	Chewing gum

Water

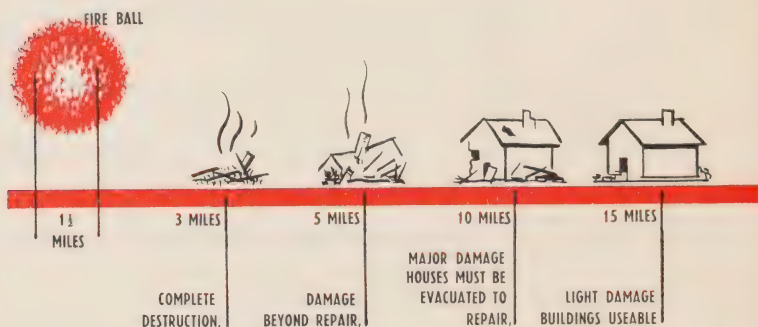
Requirement:	7-14 gallons for each adult member of the family; more for young children
Containers:	Store in well cleaned, tightly-covered containers such as large thermos jug, new fuel cans, large vinegar bottles etc.
Change:	Change the stored water at least once a month.

STEP 6

KNOW HOW TO PREVENT AND FIGHT FIRES

In Step 1 it was said that serious fires probably would extend up to 9 miles and some fires up to 20 miles from the point of burst of the bomb.

Misinformation about the fire danger is widespread and common. For example, some persons believe that the fire ball created by the detonation would completely incinerate a city. This is not true. In relation to the distances at which blast damage would destroy buildings, the diameter of the fire ball is considerably smaller.



The heat from this fireball lasts about 15 seconds. The fires it creates are not different from fires you see in peacetime. They can be put out with water and extinguishers, and the sooner the better because they could spread and thereby burn a city. If each survivor were able to put out a fire, mass fires would not take place.

The heat flash from the fireball entering through windows and doors could set fires to curtains, clothes, furniture, and paper. Other fires could break out in attics, in backyard trash, on wooden shingles and on the outside of houses built of wood.

Knowing how to prevent and fight fires at home and at work reduces the number of peacetime fires. It will also reduce the number of fires caused by a nuclear explosion.

But how can you fight fires in the presence of fallout? From five to fifteen miles from the centre of the explosion there may

be many survivors. Fallout will not start coming down for about a half hour. It is during this half hour that survivors should inspect their houses and put out all the small fires they can. They will not be able to rely on the fire department.

Finally what about fire storms? Some persons believe that the nuclear bomb always starts fire storms like that at Hiroshima. This is not true. Fire storms take place only under special conditions. The possibility of fire storms in Canadian cities is so slight that the fire authorities discount them. The possibility of conflagrations is much greater. This danger can be greatly reduced by putting out the small fires.



Attend any emergency fire fighting classes held in your area. You should have in your home and place of work fire extinguishers, or if time permits an adequate water supply in pails, bathtubs, washtubs etc. Don't rely on being able to use the established water supply system.

Even those who live in areas not attacked may find their fire departments will have to fight major fires elsewhere. Therefore every householder in peacetime should learn how to carry out fire prevention and know how to fight small fires.

KNOW FIRST AID AND HOME NURSING

The survival of the injured and sick members of your family is your responsibility.

Medical help will not be generally available in the damaged areas for several hours after an attack. Doctors and nurses will have time to treat only the most seriously injured.

Medical help will not be available in areas of fallout for several days until radiation reaches safe levels. Medical help will not be readily available in areas unaffected by the attack since doctors and nurses will be required to look after the casualties from the damaged areas.

Therefore you must:

Know and practise life-saving first aid.

Know and practise simple home nursing measures.

First Aid and Home Nursing training is available in most municipalities from your local St. John Ambulance and Red Cross Associations.

START TRAINING NOW!

A simple first aid box to keep in your shelter or in your evacuation kit should contain:

- | | |
|---|--|
| 1 bottle mild antiseptic (Metaphen) | Use to clean cuts |
| 5 yards 1½ inch gauze bandage | |
| 2 triangular bandages | Use for slings |
| 12 4" x 4" sterile pads | Use to cover cuts, wounds and burns |
| 12 individual Band Aids | Use for minor cuts |
| 5 yards ½ inch adhesive tape | |
| 8 assorted safety pins | |
| ½ oz. Oil of Cloves | For temporary treatment of toothache |
| 12 Aspirin | |
| 1 small scissors | |
| 1 First Aid Booklet | |
| 4 oz. Baking Soda }
8 oz. table Salt } | 1 tsp. salt and ½ tsp baking soda in 1 qt. drinking water. Encourage seriously burned patient to drink as much as he can of this solution. |

NOTE: Individuals requiring special medication such as insulin should maintain at least 100-days supplies.

KNOW EMERGENCY CLEANLINESS

Your limited supply of water must be rationed and used only for essential purposes. If you have enough warning time, fill your bathtub, buckets, and pans with water. Cover them so they will not be exposed to fallout. And remember there is an emergency supply in your water tank. (Don't forget this if in peacetime your water supply has been temporarily disrupted).

The problem of garbage and human waste disposal can be solved even if fallout keeps you in shelter. Put all your garbage in tightly covered garbage pails. After using your emergency toilet, human waste should be tied in waterproof plastic bags and put in the garbage pail. Store a two weeks supply of plastic bags.

After the second day in shelter there is no risk in leaving it for a few seconds for essential tasks in the basement. Therefore, when your garbage container is filled, move it out of the shelter and into the basement.



HOT WATER TANK
AS SOURCE OF WATER

HUMAN WASTE
IN PLASTIC BAG

GARBAGE CAN FOR WASTE

BURY WASTE AND
GARBAGE WHEN SAFE

Keep a soft broom in the shelter to keep it tidy.

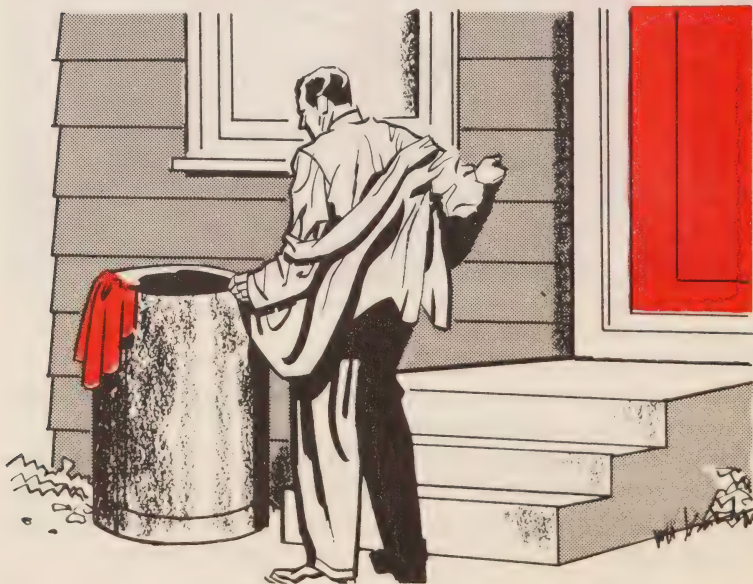
Remember personal cleanliness in crowded shelter conditions is important to you and your family.

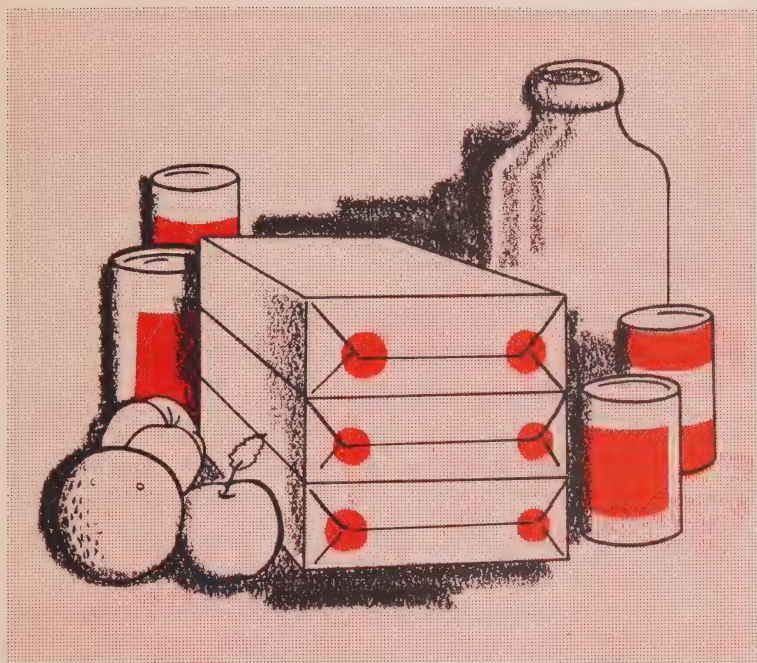
If your area is free of fallout but is without water and sewage service, bury human waste and garbage in the ground. Dig the pit deep enough so that the waste will be covered by at least two feet of earth.

KNOW HOW TO GET RID OF RADIOACTIVE DUST

In Step 2 fallout was described as “snow”. To remove the danger, remove the “snow”. If you suspect that your clothes have fallout on them, remove your outer clothing before you come inside your home and leave them outside. Don’t shake these clothes inside the house or shelter. You would only scatter the fallout dust and create unnecessary danger to others. If you have water, wash thoroughly, particularly exposed skin and hair. But do not scrub your skin as that might rub the radioactive particles into your skin.

Exposure to fallout does not make you radioactive. Even if you are stricken with radiation sickness, this sickness is not catching. But fallout on your clothing or body would expose you and those close to you to radiation. If you suspect you have been exposed to fallout, you will not be a danger to others if you carefully get rid of your outer clothes and wash.





Food and Water

Since most of your food will be in tightly covered containers (cans, bottles, plastic or boxes), it will all be safe to eat or drink *if* you dust or wash the containers. Food, whether in containers or not, provided it was in undamaged and closed cupboards, operating refrigerators and deep freezes, would also be safe to eat.

To be sure about fruits, i.e., apples, oranges, grapefruits, bananas, wash first and peel carefully. The same applies to vegetables.

Water will be safe if it is in containers tightly covered, has come from covered wells, or undamaged water systems.

If you are unsure of a particular food, or source of water, do not use it. But do not starve or die of thirst just because you think it is contaminated.

KNOW YOUR MUNICIPAL PLAN

It is important that your local municipality have a plan for a war emergency. And it is just as important that you know that plan. Is your community a likely target area or a reception area? What does your local municipal authority want *you* to do in local emergency operations? How will your welfare, police, fire, and health services operate? If your area is a likely target, does the municipality have a traffic plan?

If you live in a likely target area, you have two choices—staying put, or if there is time, evacuating. The decision is yours.

If you do not live in a likely target area, your chances of survival are best if you do not try to evacuate on your own. By doing so you may eventually arrive in another area more seriously affected by fallout. Remember protection against fallout is simple. If you prepare your own personal survival plan, in your own home, your chances of survival are excellent.

Municipalities must also develop plans that will assist individuals. Likely target areas must develop plans to facilitate the evacuation of those who choose to evacuate. They must also organize their emergency services to assist the Armed Services in case the area is attacked, so that those who might be injured and trapped can be rescued.

Communities which are not likely target areas must develop plans for the reception of evacuees and casualties. They must also develop plans whereby radiation fallout will be monitored so that information about the fallout can be given to the population. Plans must also be developed to evacuate a community should the amount of radioactive fallout be too much to permit persons to resume normal activities.

There are many other things municipalities must do to develop comprehensive municipal emergency plans. The provincial and federal authorities provide advice and assistance as to how these plans should be developed.

HAVE A PLAN FOR YOUR FAMILY AND YOURSELF

If you know all the information in the first nine steps, and you know your municipal plan for war emergency you can now make your personal survival plan. The success of your plan will depend on how many of the recommendations, suggested in this pamphlet, you carry out. If you leave things to the last minute you will not have time to get ready. Your chances of survival increase as you carry out each recommendation. The remainder of Step 11 will direct some important questions and advice to persons living in likely target areas, and to those living in areas not likely to be attacked but which might come under radioactive fallout. The answers you give will guide you in completing your plan.

For those living in likely target areas

If there is sufficient time following an *ALERT WARNING* will you choose to evacuate? If 'yes' can you answer these questions?

- a. What traffic routes have been assigned to the part of the city in which you live or work?
- b. Do you have friends living outside the city where you could go? Is the community in which they live on your evacuation traffic route?
- c. Does the traffic plan for evacuation permit you to join your family at home or elsewhere?
- d. Are your emergency supplies ready for evacuation?

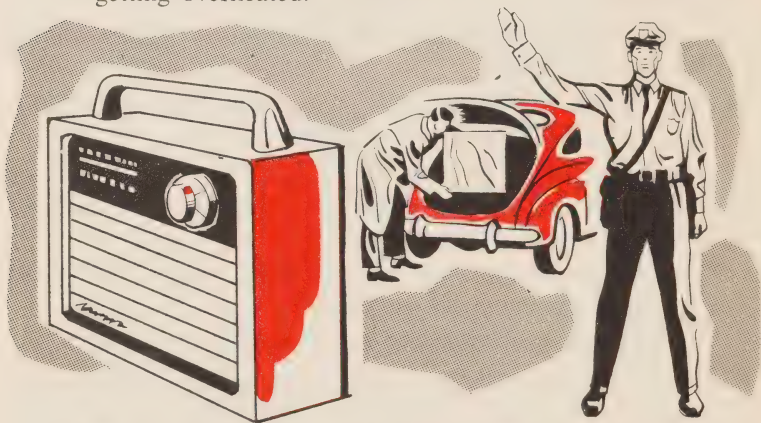
If you decide not to evacuate and do not have a blast shelter, or if there is not enough time to evacuate can you answer these questions?

- a. What is the strongest part of your basement?
- b. Is it out of direct line of glass windows?
- c. Can you readily erect a lean-to shelter in that part of the basement?
- d. What items of the emergency supplies are you going to keep in that part of the basement?

- e. If you do not have a basement where can you find improvised shelter?
- f. If an attack takes place and you survive what do you do then?

Here is some final advice which will help you make your plan. After you hear the ALERT WARNING:

- a. If not at home go to the nearest radio: If at home one member of the family listen for instructions, the remainder start putting the plan into operation.
- b. If you have decided to evacuate make sure your emergency supplies are put into the car.
- c. Follow the instructions and directions of the traffic police. You may get involved in traffic delays—don't get impatient—if traffic is stalled keep your engine running faster than normal idling. This will keep the engine from getting overheated.



- d. If you are stalled and blocking traffic put your car into high gear and push the starter button until the car is over to the side of the road. You cannot do this with an automatic drive type of car. Get out and try to get another car to push you to the roadside.
- e. Do what you are told by those who will be directing the survival operations. Lives will depend upon your co-operation.

If you do not choose to evacuate following the ALERT WARNING get into the strongest part of the basement if you do not have a blast shelter. The safest part of your basement will either be under the basement stairs or in the corner nearest the centre of the city. If the TAKE COVER WARNING has not been sounded you will be able to do some of the improvisations suggested on page 20. Don't forget the battery operated radio!

After the TAKE COVER WARNING is given get into your improvised shelter and lie flat on your stomach with your arms folded under your face. Stay in that position until the explosion is over or until you are advised over the radio that it is safe to move.

If the attack takes place and you survive the immediate effects of heat and blast and immediate radioactivity, you will now be in danger from fire and fallout. But you should have about 30 minutes before fallout starts to come down to:



- a. Put out any small fires that have started;
- b. Give first aid to those that need it;
- c. Check your own protection against fallout.

If your basement or improvised protection has been badly damaged and cannot be improved, find another basement which will give you better protection. Take as much of your emergency supplies as you can. Because you do not know exactly where the fallout will come down you should not try to run to what you think is a safe area. Time will be against you. Get into the best cover you can find and stay there until you are advised over the radio, or until rescue workers find you.

For those who do not live in likely target areas

When you learn of the ALERT WARNING go to the nearest radio and listen for instructions. Because it will take the fallout some time to reach your community—a half hour or more—you will have time to carry out last minute preparations. Your chances of survival are best if you STAY PUT in your community. Even if you hear over the radio that your community is in the path of fallout don't assume that other areas are going to be free of the danger. Later attacks, changes in wind directions, may bring fallout down on areas you thought might be safe.

If you have not provided your family with a fallout shelter improvisations can be carried out. See Step 4.

Keep listening to the radio. You will be told by the authorities when the fallout is expected to arrive. With the time you have at your disposal carry out the following:

- a. Check your fallout shelter and its equipment;
- b. If you do not have a fallout shelter see Step 4 for improvised methods of protection;
- c. Check your supplies of food, water, and first aid equipment;



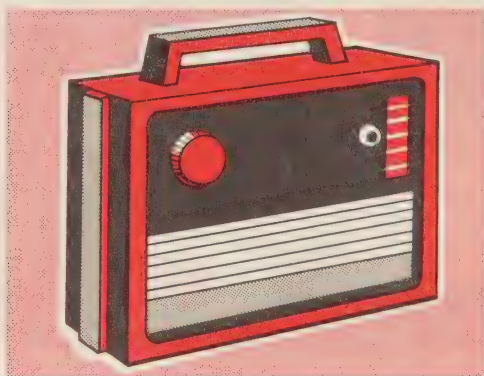


- d. Make sure the basement windows are blocked;
- e. Check your battery operated radio and spare batteries;
- f. Gather your family together if possible;
- g. Follow any instructions issued by the authorities.

Following nuclear attacks specially trained and equipped teams of radiation monitors will measure the radioactivity. When it has been measured the authorities will advise those who are in safe areas that they can come out of their fallout shelters. Because of the danger in other areas instructions may be issued to some that they will have to remain in shelter for periods up to fourteen days. Some areas might have such dangerous levels of radioactivity that even after people had been in shelter for some days, it may be unsafe for them to remain in these areas. Instructions may then

be given that persons in these areas should evacuate to areas known to be safe from the fallout hazard. *The importance of having a battery operated radio cannot be over-emphasized.* It will be the only sure way that you will know what is expected of you.

If you are told that your area must be evacuated because of the radioactive fallout hazard you will be advised of the time you will move, what routes you will travel, what items of your emergency supplies you should take with you. Follow whatever instructions are given implicitly. Your life will depend on your action.



Conclusion

You should now be ready to complete your family survival plan. It will be based on:

- a. Having a shelter or an evacuation plan;
- b. Knowing the warning signals;
- c. Knowing what you and your family are to do when an ALERT WARNING is given;
- d. Having a battery operated radio, water and food;
- e. Assigning each member of your family a job in putting the plan into action.

When you and your family are satisfied that the plan is complete, write it down on paper. Every month review it with all members of the family so they all learn what they have to do. Put it to a test by having each member of the family carry out his job.

And finally keep reviewing this pamphlet, THE 11 STEPS TO SURVIVAL.

Hope and pray that you will never have to put your family plan into actual operation, but if you do, remember that your chances of survival are much greater than if you had done nothing.

FOR FURTHER READING

Title	Source
Blueprint for Survival No. 1 "Your Basement Fallout Shelter"	Free from your local civil defence authorities or from provincial government.
Blueprint for Survival No. 2 "Basement Fallout Shelters for New Homes"	Free from your local civil defence authorities or from provincial government.
"Fallout on the Farm" <i>Blueprint for Survival No 3</i>	Free from the Department of Agriculture, Ottawa.
Fundamentals of First Aid	St. John Ambulance or Canadian Red Cross.
Home Nursing	Canadian Red Cross or St. John Ambulance.
"The Hazards to Man of Nuclear and Allied Radiation"	(Price approximately \$1.00) United Kingdom Information Service; Quebec City, Montreal, Ottawa, Toronto, Winnipeg, Edmonton, and Vancouver.
"Nuclear Explosions and Their Effects"	The Publications Division, Ministry of Information and Broadcasting, Delhi, India.
"The Effects of Nuclear Weapons"	Superintendent of Documents, U.S. Government Printing Office, Washington 25 (Price \$2.00).
"Your Emergency Pack" (water, food, etc.)	Free from your local civil defence authorities or from provincial government.
"Welfare Tips for Survival"	Free from your local civil defence authorities or from provincial government.
"Fire Safety in the Home"	Queen's Printer, Publications Branch (Price 15c.)

